

inverse direction.—MM. G. Bertrand, Brocq-Rousseau, and Dassonville: Comparative action of chloropicrin on the weevil and on *Tribolium*. The two parasites possess unequal resisting powers towards chloropicrin vapour, the *Tribolium* requiring longer exposure for its destruction.—M. Caullery and F. Mesnil: *Ancyroniscus Bonnierii*, a new species, parasite of *Dynamene bidentata*.—M. Nicolle, E. Debains, and E. Césari: The mutual precipitation of toxins and their antitoxins. Application to the titration of antidiphtheritic and antitetanic sera. The method of titration *in vitro*, for which great economy of time and money is claimed, has been proved to correspond with tests made *in vivo*.

MELBOURNE.

Royal Society of Victoria, December 11, 1919.—Mr. F. H. Wisewould, vice-president, in the chair.—F. Chapman: Tertiary fossils from Ooldea: Additional note. The author records a further series of fossils from this locality, collected by F. A. Cudmore, which confirms his earlier determination of their Miocene age.—Ellinor Archer: Longevity of cut flowers. Preliminary observations were made on *Acacia* blossoms and other plants. A solution of lead nitrate gave good results in preventing the vessels from being blocked, allowing the blossoms to last for weeks instead of days. Silver nitrate also acted in the same way, but not so efficiently.—E. McLennan: The endophytic fungus of *Lolium*: its development, distribution, and function. Instead of being parasitic, this fungus is now an essential part of the plant and plays an important rôle in the ripening of seed. In the ripe seed the remains of the hyphæ persist mainly in the resting endospermic combium (aleurone layer).—Jean Shannon: The structure of *Megascolex Fletcheri*, sp. nov. This is one of the few Australian earthworms which have been carefully worked out in detail.—J. T. Jutson: Notes on dust-whirls in sub-arid Western Australia. The author has had good opportunities of studying these and other æolian agencies. The occurrence of dust-whirls is practically confined to the summer months. Their general mode of rotation is counter-clockwise, although some are observed to take place in the opposite direction.—A. V. E. James: The physiography and geography of the Bulla-Sydenham area. In this paper a detailed account is given of the palæogeography of the Saltwater River and Deep Creek, the age and fossiliferous contents of the sedimentary rocks between Bulla and Keilor, and the occurrence of the igneous rocks in this area, including basalt and kaolin.

BOOKS RECEIVED.

Penrose's Annual. Pp. x+112+plates. (London: P. Lund, Humphries, and Co., Ltd.) 10s. 6d. net.

Elementary Practical Chemistry for Medical and Other Students. By Dr. J. E. Myers and J. B. Firth. Second edition. Pp. viii+194. (London: C. Griffin and Co., Ltd.) 4s. 6d.

Insect Life in Sewage Filters. By Dr. W. H. Parkinson and H. D. Bell. Pp. viii+64. (London: The Sanitary Publishing Co., Ltd.) 3s. 6d. net.

A Night Raid into Space: The Story of the Heavens told in Simple Words. By Col. I. S. F. Mackenzie. Pp. 143. (London: H. Hardingham.) 2s. 6d. net.

A Practical Handbook of British Birds. Part vi. Pp. 337-400+2 plates. (London: Witherby and Co.) 4s. net.

Ferrari's Dioptric Instruments: Being an Elementary Exposition of Gauss's Theory and its Applications. Translated by Dr. O. Faber. Pp. xxxi+214. (London: H.M.S.O.) 4s. net.

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The Engines of the Human Body. By Prof. A. Keith. Pp. xii+284+ii plates. (London: Williams and Norgate.) 12s. 6d. net.

A Synoptical List of the Accipitres. By H. Kirke Swann. Part iii. (London: J. Wheldon and Co.) 4s.

Man: Past and Present. By A. H. Keane. Revised and largely rewritten by A. H. Quiggin and Dr. A. C. Haddon. Pp. xi+582+xvi plates. (Cambridge: At the University Press.) 36s. net.

Engrais: Amendements Produits Anticryptogamiques et Insecticides. By Dr. E. Demoussy. Pp. xi+297. (Paris and Liège: Ch. Béranger.) 15 francs.

Aliments Sucrés. By Dr. E. Roux and C. F. Muttelet. Pp. vi+474. (Paris and Liège: Ch. Béranger.) 12 francs.

W. and A. K. Johnston's Orographical Atlas. Pp. 32. (London: Macmillan and Co., Ltd.) 1s. net.

The Working of the World. By J. Houston. Pp. iii+108. (London: Macmillan and Co., Ltd.) 9d.

The Chemistry and Technology of the Diazo-Compounds. By Dr. J. C. Cain. Second edition. Pp. xi+199. (London: E. Arnold.) 12s. 6d. net.

A Geography of Asia. By J. Martin. Pp. viii+298. (London: Macmillan and Co., Ltd.) 5s.

The Chemistry of Coal. By J. B. Robertson. Pp. viii+96. (London: Gurney and Jackson.) 3s. 6d. net.

Religion and Culture. By Dr. F. Schleiter. Pp. x+206. (New York: Columbia University Press; London: H. Milford.) 8s. 6d. net.

The Principles of Anatomy as Seen in the Hand. By Prof. F. Wood Jones. Pp. viii+325+2 plates. (London: J. and A. Churchill.) 15s.

Science and Life: Aberdeen Addresses. By Prof. F. Soddy. Pp. xii+229. (London: J. Murray.) 10s. 6d. net.

Springtime, and Other Essays. By Sir Francis Darwin. Pp. vii+242+viii plates. (London: J. Murray.) 7s. 6d. net.

Military Psychiatry in Peace and War. By Dr. C. S. Read. Pp. vii+168. (London: H. K. Lewis and Co., Ltd.) 10s. 6d. net.

Modern Geometry: The Straight Line and Circle. By C. V. Durell. Pp. x+145. (London: Macmillan and Co., Ltd.) 6s.

The Land of Goshen and the Exodus. By Sir Hanbury Brown. Third edition. Pp. 189. (London: E. Stanford, Ltd.) 7s. 6d. net.

Essays on Wheat. By Prof. A. H. R. Buller. Pp. xv+330. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 2.50 dollars.

Applications de la Photographie Aérienne. By L.-P. Clerc. Pp. vi+350+plates. (Paris: O. Doin et Fils.) 7.50 francs.

Chemistry for Public Health Students. By E. G. Jones. Pp. ix+244. (London: Methuen and Co., Ltd.) 6s. net.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 5.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. A. E. Conrady: Recent Progress in Applied Optics.

R-YA' SOCIETY, at 4.30.—J. H. Jeans, Prof. A. S. Eddington, Sir F. Dyson, Prof. A. Fowler, E. Cunningham, Prof. H. F. Newall, Prof. F. A. Lindemann, and possibly Sir J. Larmor: Discussion on the Theory of Relativity.

LINNEAN SOCIETY, at 5.—Dr. R. Ruggles Gates: The Existence of Two Fundamentally Different Types of Characters in Organisms.

ROYAL INSTITUTE OF PUBLIC HEALTH, at 5.—Dr. E. C. Morland: Climate in Tuberculosis.

CHEMICAL SOCIETY, at 8.—(Ordinary Meeting, followed by an Informal Meeting.)

ROYAL SOCIETY OF MEDICINE (Obstetrics and Gynaecology Section), at 8.—Dr. Goodall: The Origin of Tumours of the Ovary.—G. Ley: A Statistical Report of Carcinoma of the Ovary as met with in the Patho-

logical Institute of the London Hospital between the years 1907-1919 inclusive, showing the Relative Frequency of Primary and Secondary Ovarian Carcinoma.

FRIDAY, FEBRUARY 6.

- GEOPHYSICS COMMITTEE (at Royal Astronomical Society), at 5.—Sir Charles Parsons and Others: The Practicability of, and Scientific Advantages to be derived from, a Deep Boring.
 ROYAL COLLEGE OF SURGEONS, at 5.—V. Z. Cope: The Surgical Aspect of Dysentery.
 CONCRETE INSTITUTE (at Denison House, 236 Vauxhall Bridge Road), at 6.—H. J. G. Bamber: The Practical Testing of Cement.
 INSTITUTION OF ELECTRICAL ENGINEERS (Students' Meeting) (at the City and Guilds (Engineering) College), at 7.—F. R. Housden: Electric Lifts and Cranes.
 JUNIOR INSTITUTION OF ENGINEERS (at 39 Victoria Street), at 7.30.—Capt. J. Bradford: Tank Work in the Army.
 TECHNICAL INSPECTION ASSOCIATION (at the Royal Society of Arts), at 7.30.—J. Waite: The Treatment of Steel.
 ROYAL SOCIETY OF MEDICINE (Anesthetics and Laryngology Sections), at 8.30.—Dr. F. S. Rood and Others: Discussion on Anaesthesia in Throat and Nose Operations.
 ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Prof. Sir Walter Raleigh: Landor and the Classic Manner.

SATURDAY, FEBRUARY 7.

- ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir F. W. Dyson: The Astronomical Evidence bearing on Einstein's Theory of Gravitation. II. Displacement of Solar Spectral Lines.

MONDAY, FEBRUARY 9.

- ROYAL GEOGRAPHICAL SOCIETY (at Lowther Lodge), at 5.—Capt. H. Alan Lloyd: Characteristics of the Ground as seen from the Air.
 ROYAL COLLEGE OF SURGEONS, at 5.—H. T. Gray: The Influence of Nerve Impulses on Gastro-intestinal Disorders.
 BIOCHEMICAL SOCIETY (at Imperial College of Science and Technology, Botany Building), at 5.30.—H. Chick and E. M. Hume: Production in Monkeys of Symptoms closely Resembling Pellagra, by prolonged Feeding on a Diet of Low Protein Content.—C. C. Wood and S. B. Schryver: Demonstration of Method of Determining the Methoxyl Groups in Plant Tissues.
 ROYAL SOCIETY OF MEDICINE (War Section), at 5.30.—Sir Wilmot Herringham and Others: Discussion on Gas Poisoning.
 INSTITUTION OF MECHANICAL ENGINEERS (Graduates' Association), at 8.—Mr. C. C. Carpenter: Fuels.
 MEDICAL SOCIETY OF LONDON, at 8.30.—Dr. H. Drinkwater: The Clinical or Naked Eye Diagnosis of Diptheria and other Infections of the Fauces.—Dr. T. B. Hyslop: Some New Methods of Illustration.

TUESDAY, FEBRUARY 10.

- ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. G. Elliot Smith: The Evolution of Man and the Early History of Civilisation. III. The Search for Gold.
 ROYAL SOCIETY OF MEDICINE, at 5.—Prof. A. D. Waller: The Measurement of Human Emotion and of its Voluntary Control (Occasional Lecture).
 INSTITUTION OF CIVIL ENGINEERS, at 5.30.—P. M. Crosthwaite: Experiments on the Horizontal Pressure of Sand.—Dr. A. R. Fulton: Overturning Moment on Retaining-Walls.
 ZOOLOGICAL SOCIETY OF LONDON, at 5.30.—Dr. P. Chalmers Mitchell: Report on the Additions made to the Society's Menagerie during the months of November and December, 1919.—R. I. Pocock: Exhibition of Photographs of a Chinese Serpent.—H. R. Hogg: Some Australian Opiliones.—Dr. C. F. Sonntag: Description of the Larynx and Oesophagus of a Common Macaque, exhibiting several unusual Features.—R. E. Turner and J. Waterston: A Revision of the Ichneumonid Genera Labium and Pencilcryptus.
 ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—Annual General Meeting.
 QUEKETT MICROSCOPICAL CLUB, at 7.30.—Annual General Meeting.

WEDNESDAY, FEBRUARY 11.

- ROYAL UNITED SERVICE INSTITUTION, at 3.—Col. F. C. Fuller: The Tank Corps.
 ROYAL SOCIETY OF ARTS, at 4.30.—Lieut.-Comm. N. Wilkinson: Naval Camouflage.
 ROYAL COLLEGE OF SURGEONS, at 5.—J. Sherren: The Late Results of the Surgical Treatment of Chronic Ulcers of the Stomach and Duodenum (Hunterian Lecture).

THURSDAY, FEBRUARY 12.

- ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. A. E. Conrady: Recent Progress in Applied Optics.
 ROYAL SOCIETY, at 4.30.—*Probable Papers*: J. W. McBain and C. S. Salmon: Colloidal Electrolytes. Soap Solutions and their Constitution.—C. C. Farr and D. B. Macleod: The Viscosity of Sulphur.—C. V. Raman and B. Banerji: Kaufman's Theory of the Impact of the Pianoforte Hammer.—Commander T. Y. Baker, R.N., and Prof. L. N. G. Filon: A Theory of the Second Order Longitudinal Spherical Aberration for a Symmetrical Optical System.—Dr. S. Chapman: A Note on Dr. Chree's Discussion of Two Magnetic Storms (Title only).—Dr. C. Chree: An Explanation of the Criticisms on Dr. Chapman's Recent Paper: "An Outline of a Theory of Magnetic Storms" (Title only).—Prof. J. W. Nicholson: The Lateral Vibrations of Sharply Pointed Bars.—R. E. Slade: A New Method of Spectrophotometry in the Visible and Ultra-violet and the Absorption of Light by Silver Bromide.
 BRITISH PSYCHOLOGICAL SOCIETY (Education Section) (at London Day Training College), at 6.—Dr. C. W. Kimmins: The Dreams of Children in Blind, Deaf, and Industrial Schools.
 INSTITUTION OF ELECTRICAL ENGINEERS (at Institution of Civil Engineers), at 6.—Major K. Edgcumbe: The Protection of Alternating-current Distribution Systems without the Use of Special Conductors.
 OIL AND COLOUR CHEMISTS' ASSOCIATION (at 2 Farnival Street), at 7.—Dr. R. S. Morrell: Colloid Chemistry of Paints and Varnishes.
 OPTICAL SOCIETY, at 7.30.—J. W. French: The Surface Layer of an Optical Polishing Tool.—Mrs. C. H. Griffiths: Aberration Effects in Star

Images.—R. W. Cheshire and W. Shackleton: The Testing of Heliograph Mirrors.

INSTITUTION OF AUTOMOBILE ENGINEERS (Graduate Section) (at 28 Victoria Street), at 8.—F. R. Cowell: Steering Gears.

ROYAL SOCIETY OF MEDICINE (Nervology Section), at 8.30.—Dr. Rows: Anxiety States.

FRIDAY, FEBRUARY 13.

- ROYAL ASTRONOMICAL SOCIETY, at 5.—
 PHYSICAL SOCIETY, at 5.—Prof. C. H. Lees: Presidential Address.—Sir Arthur Schuster: Atmospheric Refraction during Total Solar Eclipses.—To be followed by the Annual General Meeting.
 ROYAL COLLEGE OF SURGEONS, at 5.—W. G. Spencer: The Historical Relationship between Experiments on Animals and the Development of Surgery.
 MALACOLOGICAL SOCIETY OF LONDON (at the Linnean Society), at 6.
 ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Prof. W. M. Bayliss: The Volume of the Blood and its Significance.

SATURDAY, FEBRUARY 14.

- ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir F. W. Dyson: The Astronomical Evidence bearing on Einstein's Theory of Gravitation. III. Deflection of Light in the Sun's Gravitational Field.

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